



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,141	07/21/2006	Michael J. Minot	INCOM-001XX	4985
207 7590 05/05/2010 WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109			EXAMINER NAGPAUL, JYOTI	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 05/05/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Amendment filed on January 26, 2010 has been acknowledged. Claims 1-42 are pending.

Response to Amendment

Rejection of Claims 1-10, 14-15, 20 and 29-42 as being anticipated by Rushbrooke (US 6646272) has been maintained in light of applicants' arguments/amendments.

Rejection of Claims 11-13 as being unpatentable over Rushbrooke has been maintained in light of applicants' arguments/amendments.

Rejection of Claims 16-19 and 21-28 as being unpatentable over Rushbrooke in view of Cunningham (US 2003/0027327) has been maintained in light of applicants' arguments/amendments.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-10, 14-15, 20 and 29-42** are rejected under 35 U.S.C. 102(b) as being anticipated by Rushbrooke (US 6646272).

Rushbrooke teaches a method and apparatus for imaging biological samples. The apparatus comprising a substrate (24) having a surface. The surface defining a plane (refer to figure 5). The substrate (24) integrally comprising a plurality of optic

Art Unit: 1797

fibers (32) having a substantially parallel axes that are essentially perpendicular to the plane of the substrate. The apparatus further comprising a layer (20) formed on the surface of the substrate (24) defining at least one topological feature, well (26). The at least one topological feature communicates with at least one optic fiber (32) for interrogation of a sample. (Refer to Figure 3) The substrate (24) further integrally comprises clad glass (UV transmitting glass, Refer to Figure 3). According to Figure 3, the at least one optic fiber (32) comprises a region of core glass. The layer formed on the surface of the substrate (24) comprises a photoresist material comprising a polymeric resin. (Refer To Col. 7, Lines 37-66) Rushbrooke further teaches at least one optic fiber is associated with at least one charged coupled device for interrogation of the sample. (Refer to Col. 10, Lines 7-22)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rushbrooke.

Refer above for the teachings of Rushbrooke.

Rushbrooke fails to teach the layer formed on the surface of the substrate has a thickness less than about 250 micrometers and a diameter of at least one well is less than about 10 mm.

It would have been obvious to one having ordinary skill in the art to modify the layer formed on the surface of the substrate device of Rushbrooke to have a thickness less than about 250 micrometers and a diameter of at least one well is less than about 10 mm to use a smaller sample size when performing the analysis.

7. **Claims 16-19 and 21-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rushbrooke in view of Cunningham (US 2003/0027327).

Refer above for the teachings of Rushbrooke.

Rushbrooke fails to teach a second layer formed on the layer and the second layer defines at least one topological feature.

Cunningham teaches optical detection device for biological interactions. The device comprises a microfluidic device comprising channels forming at least one topological feature. The channels are formed by a second layer (UV cured epoxy layer or spin on glass), refer to figure 5. (Refer to paragraph [0112])

It would have been obvious to one having ordinary skill in the art to provide a second layer defining at least one topological feature and performing the method as disclosed in Cunningham to achieve the predictable results of producing a microfluidic device having channels in order to perform the same analysis using a different device.

Response to Arguments

8. Applicant's arguments filed on January 26, 2010 have been fully considered but they are not persuasive. Applicants argue that independent claims 1 and 37 recite "a layer that is **formed** on the surface of the substrate." Applicants argue that this limitation is not taught by Rushbrooke. It is the examiners position that applicants' are claiming a device in independent claims 1 and 37 and methods of forming and making are not germane to patentability in apparatus or device claims.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI NAGPAUL whose telephone number is (571)272-1273. The examiner can normally be reached on Monday thru Friday (10:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jyoti Nagpaul/
Primary Examiner, Art Unit 1797